

Harry C. Crooker & Sons, Inc.
Sagadahoc County
Topsham, Maine
A-187-71-K-A

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**Departmental
Findings of Fact and Order
Air Emission License
Amendment #1**

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Harry C. Crooker & Sons, Inc. of Topsham, Maine was issued Air Emission License A-187-71-J-R on November 8, 2005 permitting the operation of emission sources associated with their Topsham, Maine asphalt batch plant and crushed stone facility.

B. Harry C. Crooker & Sons, Inc. has requested an amendment to their Air Emissions License to include a new portable jaw crusher and associated diesel generator to the facility's licensed equipment inventory list.

C. Emission Equipment

Harry C. Crooker & Sons, Inc. is applying to include the following equipment in their current air emission license:

Rock Crushers

<u>Designation</u>	<u>Power Source</u>	<u>Process Rate (tons/hr)</u>	<u>Control Device</u>
Portable Crusher	Diesel Drive	245	Spray Nozzles

Associated Diesel Units

<u>Equipment</u>	<u>Fuel Type, % Sulfur</u>	<u>Maximum Firing Rate</u>	<u>Power Output</u>
Portable Diesel #1	Diesel Fuel, 0.05%	15 gal/hr	300 HP

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D. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the “Significant Emission Levels” as given in Maine’s Air Regulations. The expected emissions increases from the addition of the portable jaw crusher and associated diesel do not exceed the “Significant Emission Levels” therefore, this modification is determined to be a minor modification and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Air Regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Portable Jaw Crusher

Harry C. Crooker & Sons, Inc. has requested an air emission license amendment to include the addition of a new portable jaw crusher, designated Portable Crusher #1. The new crusher, designated Portable Crusher #1, was manufactured in 2005 by BL-Pegson Limited and has a maximum process rate of 245 tons per hour (tons/hr).

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Portable Crusher #1 is subject to EPA New Source Performance Standards (NSPS) Subpart OOO for Nonmetallic Mineral Processing Plants manufactured after August 31, 1983, with capacities greater than 150 tons/hr for portable plants and greater than 25 tons/hr for non-portable plants. As a requirement of NSPS Subpart OOO, a visible emissions performance test (EPA Method 9) is required to be performed on the Portable Crusher #1.

The regulated pollutant from the rock crusher equipment is particulate emissions. To meet the requirements of Best Available Control Treatment (BACT) for control of particulate matter (PM) emissions from the rock crusher, Harry C. Crooker & Sons, Inc. shall maintain and operate water sprays on Portable Crusher #1 in such a manner as to control visible emissions to no greater than 10% opacity on a 6-minute block average basis.

C. Associated Diesel Unit

Harry C. Crooker & Sons, Inc. has applied to include a portable diesel generator, designated Portable Diesel #1, to the facility's current air emission license. Portable Diesel #1 will act as the primary power source for the new Portable Crusher #1. Portable Diesel #1 was manufactured by Cat and has a maximum design power output of 300 HP. BACT for Portable Diesel #1 is the use of on-road diesel fuel with a sulfur content of no greater than 0.05% sulfur by weight. Harry C. Crooker & Sons, Inc. shall be limited to firing no greater than 27,000 gallons per year (gal/yr) of diesel fuel on a calendar year basis.

A summary of the BACT analysis for Portable Diesel #1 is as follows.

1. BACT for PM is emissions not to exceed 0.12 lb/MMBtu. PM₁₀ emissions limits are based on PM limits.
2. For the use of diesel fuel oil, BPT is a sulfur content not to exceed 0.05% sulfur by weight.
3. NO_x, CO and VOC emission limits are based upon AP-42 data dated 1/95 for #2 fuel and 12/00 for natural gas.
4. Visible Emissions from Portable Diesel #1 are limited to no greater than 20% opacity on a 6-minute block average, except for no more than one 6-minute block average in a continuous 3-hour period

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D. Annual Emission Restrictions

Harry C. Crooker & Sons, Inc. shall be restricted to the following annual emissions, based on a twelve-month rolling total:

- Harry C. Crooker & Sons, Inc. shall be limited to firing no greater than 27,000 gallons of on-road diesel fuel with a sulfur content of no greater than 0.05% sulfur by weight in the Portable Crusher #1 based on a calendar year basis.
- Total facility potential to emit is calculated based on the worst case scenario, which in this case is the use of 400,000 gallons per year of a #2 fuel oil and specification waste oil in the Asphalt batch plant.

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	2.9
PM ₁₀	2.9
SO ₂	19.8
NO _x	29.8
CO	52.2
VOC	6.5

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a non major source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source. An air quality analysis is not required for this amendment.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

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Department hereby grants Air Emission License Minor Revision A-187-71-K-A, subject to the conditions found in Air Emission License A-187-71-J-R and in addition to the following conditions:

The following Condition shall be in addition to Condition (17) in Air Emission License A-187-71-J-R:

- E. Portable Crusher #1 shall be included in and shall be subject to Condition (17), paragraphs A, B, C, and D of Air Emission License A-187-71-J-R. [MEDEP Chapter 115, MEDEP Chapter 101, 40 CFR 60, Subpart OOO]
- F. Harry C. Crooker & Sons, Inc. shall have an initial performance test performed on Portable Crusher #1 per the applicable sections of 40 CFR Part 60, Subpart OOO, §60.675. This consists of a certified Method 9 observation. The performance test shall be completed by within 60 days of achieving the maximum production rate but no later than 180 days after initial start-up. Harry C. Crooker & Sons, Inc. shall submit a test notice to the regional inspector at least 30 days prior to the performance test. Any rescheduled test requires a 7-day notice to the regional inspector. [40 CFR 60, Subpart OOO]

The following are new Conditions to Air Emissions License A-187-71-J-R

(25) Portable Diesel #1

- A. Total fuel use for Portable Diesel #1 shall not exceed 27,000 gal/year of on-road diesel fuel with a maximum sulfur content of 0.05% by weight on a calendar year basis. [MEDEP Chapter 115, BPT]
- B. In order to demonstrate compliance with fuel use restrictions, Harry C. Crooker & Sons, Inc. shall maintain a record of fuel oil purchases, which shall include receipts indicating the amount of fuel delivered and certification from the supplier indicating the sulfur content of the purchased fuel is below 0.05% sulfur by weight. The fuel record shall be maintained on a monthly basis as well as the calendar year basis. [MEDEP Chapter 115, BPT]
- C. Emissions from the diesel generator unit shall be limited to the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
C637-1	lb/hr	0.3	0.3	0.1	9.2	2.0	0.7

[MEDEP Chapter 103]

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D. Visible emissions from Portable Diesel #1 shall not exceed 20% opacity on a 6-minute block average, except for no more than one 6-minute block average in a 3-hour period. [MEDEP Chapter 101]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2006.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

This amendment shall expire concurrently with Air Emission License A-187-71-J-R.

Date of initial receipt of application: **May 23, 2006**

Date of application acceptance: **June 1, 2006**

Date filed with the Board of Environmental Protection: _____

This Order prepared by, Peter G. Carleton, Bureau of Air Quality